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ABSTRACT

Following an overview and background information on Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome (HIV/AIDS), this paper is divided into six sections. The first section discusses the extent of the problem and educational implications for children, adolescents, and young adults. The second section, Calls to Action, provides information on calls for action that have issued from schools, parents, institutions of higher education, community organizations, national and state government agencies, media, and professional groups. The third section addresses the need to plan prevention strategies. Specific topics in this section are: primary, secondary, and tertiary prevention goals and strategies; comprehensive school health education and programs; and characteristics of effective HIV/AIDS and health education curricula. The fourth section notes implementation barriers at the classroom, administrative, and school-community collaborative levels. The fifth section deals with prevention within institutions of higher education and schools, colleges, and departments of education, through preparation of future educators and through partnerships with campus, school, and community groups. The sixth section outlines the AACTE/CDC Project: Build a Future without AIDS. The Joint Statement on School Health by the Secretaries of Education and Health and Human Services is appended. (Contains 10 figures and 61 references.) (JLS)

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Building a Future Without HIV/AIDS:

What Do Educators Have to Do With It?

A Commissioned Paper by
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for the
American Association of Colleges for Teacher Education

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Building a Future Without HIV/AIDS: What Do Educators Have to Do With It?

Overview

As the U.S. prepares its citizens for the demands and challenges required in the twenty-first century, signs are all too evident that many of our children and youth will reach that time unable to achieve success and productivity in their work, family, and community. Even worse, some will never reach maturity or have the opportunities to fulfill their potential.

Adolescence and early adulthood are primarily times of physical and emotional health, with low mortality rates and infrequent disabilities. However, certain behaviors practiced during this stage can alter the futures of our younger generation. Prominent among these high-risk behaviors are those related to sexual risk-taking. Consequences of these behaviors can include premature pregnancies; sexually transmitted diseases (STD), which can result in infertility; or HIV infection, which is disabling and ultimately life-threatening.

While STDs and premature pregnancies among adolescents are not new problems, they have intensified in recent years as the time span between initiation of intercourse and marriage has increased. This has led to greater premarital intercourse and a greater number of premarital sexual partners among adolescents. Increased rates of STDs, including AIDS, have resulted.

When one looks at the long-term costs of sexual risk taking on the lives of children, youth, and young adults, the extent of the tragedy becomes painfully apparent. Premature pregnancy can have an impact on a young person's education level, employment opportunities, marital stability, and risk of welfare dependency. HIV infection and other STDs can affect physical health, ability to bear children, and chances for a normal life span. If a disease is, in turn, passed on to infants during pregnancy, childbirth, or breast feeding, the dimensions of tragedy intensify as it spreads to a second generation.

Background

AIDS is the result of infection by the human immunodeficiency virus (HIV). Once a person contracts HIV, AIDS almost inevitably follows, although it sometimes takes 10 or more years to appear. Though a person with HIV can live a healthy life for many years, HIV will eventually impair the body's immune system, which combats illness. When the immune system can no longer fight diseases, that person is diagnosed with AIDS. HIV is transmitted though exchange of body fluids, such as blood, semen, and vaginal fluid. The primary behaviors associated with AIDS transmission are:

- Sexual intercourse that is anal, vaginal, or oral;
- Sharing needles or syringes for intravenous (I.V.) drug use, medications, or tattoos;
- Blood transfusions (since 1985 blood banks in the U.S. have been required to test for the virus so that this is rarely a problem); and
- Mother to child through pregnancy, birth, or breast feeding.

The only completely effective means of preventing unintended pregnancy and STDs, including AIDS, is to refrain from sexual intercourse. For those who are sexually active, the risk of an unintended pregnancy can be decreased by the correct and consistent use of condoms or other contraceptives. Behaviors that can reduce the risk for STDs, including AIDS, include: (1) correctly and consistently using condoms, (2) maintaining a monogamous sexual relationship with an uninfected partner, (3) reducing the number of sex partners, and (4) avoiding shared needles or having unprotected sex with a partner who has shared needles.

The Extent of the Problem and Educational Implications

Children Ages 0-12. As of 1996, approximately 7,300 children have AIDS and an estimated 10,000 - 20,000 other children are HIV-positive. (See figure 1.) Many HIV-infected children have no symptoms, are unaware that they have HIV, and have not come to medical attention. The numbers are expected to continue to increase as the proportion of childbearing women who are HIV-positive increases.

Children infected with HIV are living longer; over half are in school. The health and educational needs of these children are intensive: many have learning difficulties and special education needs; some need counseling and special assistance for behavioral/psychological problems (Cohen, Papola, & Alvarez, 1994). As with other children who have chronic illness, absenteeism due to illness or medical tests can cause secondary educational and social problems due to falling behind in school work and intolerance by classmates. HIV-infected children often have seen close family members die or become ill -- intensifying their needs.

Figure 1. The Facts:
Incidence and Prevalence of HIV/AIDS in Children Ages 0-12

- 7,296 children have contracted AIDS, primarily through childbirth and breast-feeding (CDC, 1996). Another 10,000 - 20,000 children are HIV positive but not symptomatic and have not come to medical attention (Annunziato & Frenkel, 1993).
- Approximately 1,000 - 2,000 HIV-infected babies were born during 1993 (CDC, 1995).
- Minority children are particularly hard hit: 80% of cases in children less than 13 years of age are among African Americans and Hispanics (CDC, 1996).
- More than 50% of children born with HIV infection now live into school age (Palfrey et al., 1994). The proportion of children ages 4 - 14 who have HIV/AIDS and are in schools is far greater than in the past (Cohen et al., 1994).
- Based on the rate of HIV infection among women (1.5 per 1,000 women) and a trend towards increased heterosexual transmission, the number of young children who contract AIDS is expected to continue to increase (Palfrey et al., 1994).

Due to confidentiality safeguards, the number of children with HIV is usually underestimated by schools, day care centers, Head Start programs, and other child service agencies in high-risk HIV areas (Palfrey et al., 1994). A survey of the nation's largest school districts demonstrated that schools have invested considerable time, energy, and talent in preparing to accommodate students with HIV infection. Many schools need to reappraise policies and procedures as more schoolchildren have HIV and live longer. Schools face demands to (1) expand coordination with health and social service systems to meet increasingly complex needs; (2) reexamine confidentiality issues; (3) ensure universal precautions through establishment of policies, procedures, and staff training about protective measures; (4) address public controversy; (5) assist faculty, students, and families with bereavement; and (6) establish preparedness (Lavin et al., 1994).

Educational implications. To meet the needs of HIV-infected children in school, school board members, families, school administrators, and direct service providers such as school nurses and teachers need additional training and preparation. In a recent national survey, over half of parents, administrators, and students in the nation's largest school districts reported that school board members and parents receive inadequate information about integrating children with HIV infection into the schools (Palfrey et al., 1994). Similarly, a survey of preservice

cleaning up blood or body fluids and other protective procedures (Ballard, White, & Glascoff, 1990). PTA presidents, school administrators, school nurses, school board members, school counselors, and physicians indicated in a national survey that a need exists for model HIV confidentiality policies; help with management issues; and training regarding effects of HIV on the brain, transmission issues, prevention practices, and HIV antibody testing (Kerr, Allensworth, & Gayle, 1991). Relatedly, in a statewide teacher survey, teachers reported inadequate preparation concerning counseling and testing available in the community, resources available, and social and economic issues pertaining to HIV/AIDS; and inadequate preparation for providing compassion to AIDS patients -- all critical for assisting children, families, and friends to live with HIV infection (Gingiss & Basen-Engquist, 1994).

Adolescents Ages 13-19. Although the number of AIDS cases among teens is relatively small, nearly one in five people ages 20-29 who have AIDS probably became infected with HIV during adolescence. Figure 2 shows that adolescents engage in numerous unsafe sexual practices, which place them at risk of infection. The problem is even greater among some sub-groups of young teens than summary data suggests. Sexual activity, as well as substance use, is considerably higher among students in grades 7-9 who live in economically disadvantaged communities with large numbers of HIV-infected individuals. By the time these students reach the 7th grade, many already engage in high-risk sexual practices. By age 20, many have had an STD or become pregnant. Even among those practicing birth control, the trend with increasing age to substitute other forms of contraception for condom use places young women at even higher risk for HIV infection, *since birth control pills without condoms do not protect against AIDS* and might increase the risk of some STDs.

While I.V. drug use in adolescents is relatively infrequent, young people who use "gateway" drugs such as tobacco, alcohol, and marijuana are more vulnerable to hard drugs. Increased use of alcohol and cigarettes by young teens might serve as a marker for more serious patterns of substance use, which occur when students leave high school (Bailey, 1992). Unfortunately, leaving school also signals the end of most prevention programs for adolescents.

Repeated studies have shown the interrelatedness of high-risk behavior patterns among youth. As noted in figure 2, alcohol and other drugs are directly associated with risk-taking sexual behaviors and impaired judgment. Additionally, use of alcohol and other psychoactive substances is likely to reduce teens' use of condoms (Hingson, Strunin, Berlin, & Heeren, 1990).

Pregnant teenagers 15 years of age or less whose only reported personal risk behavior was unprotected intercourse prior to pregnancy reported high rates of environmental exposure to partners, friends, and family who used alcohol or legal and illegal drugs, and who had been in trouble with the law due to drug use (Rhodes, Gingiss, & Smith, 1994). These environmental conditions coupled with patterns for accelerated substance use with increasing age and decreased likelihood of condom use with age, place these young mothers and their future infants at considerable risk for HIV infection.

Figure 2. The Facts:
Incidence and Prevalence of HIV/AIDS in Adolescents Ages 13-19

- Although the number of AIDS cases is relatively small among teens, many of those over 20 who have AIDS contracted it during adolescence. AIDS has been the 6th leading cause of death among 15-24 year olds in the U.S. since 1991 (CDC, 1994b).

- Among adolescents with AIDS, older teens, males, and racial and ethnic minorities are disproportionately affected. The proportion of adolescents with AIDS who are female has more than doubled, from 15% in 1987 to 32% in 1994 (CDC, 1994b).

Risk Factors for HIV/AIDS in Adolescents

- One-third of male students and 20% of female students have had sexual intercourse before age 15 (CDC, 1990). 70% of women who had intercourse before age 14 and 60% who had sex before age 15 report they were coerced (Alan Guttmacher Institute, 1994).

- Most fathers of babies born to teenage mothers are not teenagers themselves. The younger the women, the greater the age difference. Nearly one-third of fathers of babies born to 15-year olds are aged 21 or older, with an extended period of potential exposure to HIV prior to intercourse with the young woman (Alan Guttmacher Institute, 1994).

- In the most recent CDC Youth Risk Behavior Survey of students in grades 9-12, by 12th grade, approximately two-thirds had engaged in sexual intercourse, about half reported use of latex condoms during last intercourse, and about one-fifth had more than four lifetime sex partners. Many students reported using alcohol or drugs when they have sex (Kann et al., 1996).

- Three million teenagers acquire an STD every year; i.e., approximately one in eight young people between the ages of 13 and 19. About 25% of *all* young people have contracted at least one STD by the time they are 21 years old. 15-29 year olds account for 80% of all sexually transmitted diseases. *STDs are indicators of unprotected sexual activities and they increase HIV transmission risks three to five fold* (Cates, 1990; CDC, 1994b).

- More than 40% of young women in the U.S. become pregnant before the age of 20. The U.S. has one of the highest teenage pregnancy rates of any western industrialized country (Alan Guttmacher Institute, 1994).

- Only 35% of teens ages 15 - 17 and 31% of teens ages 18 and 19 use a condom during every act of intercourse. Condom use declines with age, often because other forms of contraception, such as birth control pills, are used in older age groups or many older youth are married or in long-term monogamous relationships. *Birth control pills without condoms do not protect against HIV infection or other STDs* (Alan Guttmacher Institute, 1994; CDC, 1994b).

Figure 2 (continued)

Related Behaviors:

- 80% of females and 81% of males in grades 9-12 have ever used alcohol. 42% had ever used marijuana and 7% had ever used cocaine. 2 percent of high school students reported injecting an illegal drug (Kann et al., 1996).
- At any given age, youth who initiate use of one or more psychoactive substances are more likely to have sexual intercourse than those who did not begin substance use (Levy et al., 1995; Mott & Haurin, 1988).
- Correlations exist between risky sexual behaviors and aggression, recklessness, use of alcohol and illicit drugs, cigarette smoking, and low self-image (Richter, Valois, McKeown, & Vincent, 1993).

Because of rates of sexual intercourse, incidence of STDs, teen pregnancies, and substance use, coupled with ineffective, inconsistent, or nonexistent contraceptive patterns, concerns are widespread that the incidence of HIV infection may increase dramatically among adolescents and young adults over the next several years.

Educational implications. The facts so far presented suggest that all young people need effective HIV prevention education, as well as STD, pregnancy prevention, and substance use prevention programs. Given the young ages of many youth at initiation of sexual activities, education must start in elementary school!

Although I.V. drug use is relatively low for adolescents still in school, use intensifies as teens drop out of school or graduate, especially in environments where use is high. Because of the rapid increase in the incidence of AIDS among women who were infected directly or indirectly from substance use, early school-based educational experiences must prepare students to manage internal and external pressures. Once adolescents become sexually active, they need additional knowledge, attitudes, and skills so they can reduce their risks of untoward consequences, access testing, and find and initiate *early* treatment for themselves, partners, or family members if needed.

School is the only place of universal access to young people. Educational programs must begin at the elementary level; by secondary school, behavioral patterns and peer groups become established and many youth will drop out. Unfortunately, a number of education and training

issues limit the effectiveness of current educational programs. The nature and scope of these problems and ways in which schools, colleges, and departments of education (SCDE) can assist will be discussed in subsequent sections.

Adults Ages 20-44. As presented in figure 3, high rates of sexual activity on college campuses, often involving multiple partners and intercourse without a condom, raise concerns about the future health of postsecondary students. When frequent alcohol use, the leading health problem on college campuses, is added to the mix, potential health hazards multiply.

Examination of patterns of HIV infection among young adults helps identify high-risk behaviors that will guide educational programs. These include heavy alcohol intake, sexual risk taking, and I.V. drug use. The increasing rate of exposure of minority women through heterosexual contact requires concerted efforts to provide these young women with the knowledge, skills, and means for protecting themselves.

Figure 3. The Facts:
Incidence and Prevalence of HIV/AIDS in Adults Ages 20-44

Through June 1996, almost 20,000 persons ages 20-24 and over 60,000 persons aged 25-29 have been diagnosed with AIDS. Exposure for most was 5-10 years earlier. In 1993 AIDS became the leading cause of death for African American women ages 25-44 (CDC, 1994b; 1995; 1996).

- One in 500 college students are infected with HIV. HIV-antibody testing at 19 university health centers reported 93% infected were men and 63% were students over age 24 (Gayle et al., 1990).
- Among men 20-24 years old, 57% of new AIDS cases were among men who have sex with men, 12% among men who injected drugs, and 7% among men who were exposed through heterosexual contact (CDC, 1996).
- Among young women with AIDS, approximately half are exposed through heterosexual contact, especially through sex with IV drug users. This is the most rapidly increasing transmission category among women. The second largest category were those exposed through direct drug injection (CDC, 1996).
- Although African American and Hispanic women make up 21% of all U.S. women, three-fourths (75%) of AIDS cases occur among African Americans and Hispanics. In 1994 the AIDS rate for African American and Hispanic women was approximately 16 and 17 times greater, respectively, than that for white women (CDC, 1995).

Figure 3 (Continued)

Risk Factors for HIV/AIDS in Adults

- Among 1,406 students in 23 Texas colleges, 81% reported having had intercourse. 50% of males and 28% of females had 4 or more partners during their life: 1/4 of sexually active males had more than 10 lifetime partners. Only 40% of those sexually active in the last 3 months used a condom; use diminished as class standing advanced. 63% did not report any behavior changes because of concerns about HIV infection (Wiley et al., 1996).

- Nationally, student drinking is the number one health problem on college campuses. During the last 30 days, 65% of Texas college students reported having had at least one drink and 33% had engaged in heavy drinking (5 or more drinks in a row within a couple of hours). 30% of students drank alcohol or used drugs before their last intercourse; 45% used a condom during last intercourse (Core Alcohol & Drug Survey, 1992; Wiley et al., 1996).

Educational implications. Postsecondary students are potential targets for prevention education to improve healthful lifestyle choices. Although HIV-related knowledge is generally high among college students, too few have applied this knowledge to consistent use of condoms or the alteration of other risky sexual behaviors. Institutions of higher education have many opportunities to reach students on campus: through faculty in their classes; through student support services, such as the student health center, counseling services, student life, and campus ministry; and through social organizations on campus.

Postsecondary students will eventually respond to many complex environmental, social, and personal factors. As citizens, parents, community members, educators, health and social service providers, politicians, and business leaders, they will set policies and implement programs of the future. Institutions of higher education have major opportunities to instill the knowledge, attitudes, skills, and motivation necessary to prepare their students to reverse negative trends.

Calls for Action

Schools, parents, institutions of higher education, community organizations, government agencies, media, and professional groups have issued calls for action.

From the National Level. In the early 1990s the Harvard School Health Education Project examined 25 major national reports that addressed the interconnectedness of children's health and education. From these reports five themes emerged that support an agenda for school-based health promotion (Lavin, Shapiro, & Weill, 1992). Figure 4 summarizes these themes. Examples of social morbidities, which are the focus of these reports, are STDs, including HIV infection; unintended pregnancy; and use of tobacco, alcohol, and other drugs.

Figure 4

Summary of a Policy Analysis of 25 National Reports About the Status of Children and Youth (Lavin, Shapiro, & Weill, 1992)

- *Education and health are interrelated.* Education affects health; health affects education. Many of the health problems affecting children, and thus their education, are preventable.
- *The biggest threats to health are social morbidities.* Social morbidities are defined by the American Medical Association as "those threats to health that are primarily the result of social environment and/or behavior."
- *A more comprehensive, integrated approach is needed.* Fragmentation of programs and services is a barrier to the effectiveness of services to children and their families. There is an urgent and compelling need for more comprehensive and coordinated policies, programs, and services.
- *Health promotion and education efforts should be centered in and around schools.* The school is where most children spend much of their time and is the one place in the community that is accessible and known by families.
- *Prevention efforts are cost effective.* The social and economic costs of failure to promote health and prevent disease are high and continue to escalate.

Agencies and offices from seven federal departments participate regularly to plan interagency approaches to health promotion through the schools (McGinnis, 1992). A joint policy statement by the U.S. Departments of Education and Health and Human Services affirms the interrelatedness between national goals in health (Healthy People 2000) and education (Goals 2000) and the importance of linkage of the two initiatives. (Appendix A)

At a June 1996 conference, the American Association of Colleges for Teacher Education convened deans and directors of teacher education. They gave strong support for schools, colleges, and departments of education (SCDE) to exercise leadership in preparing professionals to meet the multidimensional needs of children and youth, with a focus on HIV/AIDS prevention.

From the States. By 1992, all states supported including HIV/AIDS instruction within the comprehensive K-12 school health education curriculum. A survey of state programs revealed that, states had infrastructures in place (Britton, deMauro, & Gambrell, 1992). For

example, over two-thirds of states required HIV/AIDS education through law or policy, while the remainder recommended it. Almost every state provided some guidelines for teacher preparation or inservice training in HIV/AIDS education, and all states had advisory committees to guide program design and implementation. Parental support for state programs was strong. However, major gaps existed in curriculum design and content, program design, and provisions for curriculum updating. The design of state programs was often hampered by (l) inadequate teacher training, (2) failure to monitor program effectiveness, (3) limited local implementation, and (4) failure to update curriculum/guidelines regularly.

From Adolescents, Parents, and School Administrators. A 1993 national Gallup Survey funded by the American Cancer Society asked 2,823 parents, students, and administrators about the need for health education in schools (Gallup Organization, 1994). Pertinent findings include:

- Adolescents, parents, and administrators all ranked information on AIDS/STDs as the most important health topic -- significantly higher than any other health topic.
- Four of five adolescents felt information on AIDS/STDs is more important than other subjects taught in school, as did nearly two-thirds of parents and the majority of school administrators.
- Adolescents, parents, and administrators all agreed that the health topic most needing additional instructional time was AIDS/STDs.
- Nearly two-thirds of parents indicated self-esteem and drug use other than alcohol were topics equivalent in importance to AIDS/STDs.
- In addition to AIDS/STDs, over half of school district administrators included alcohol and other drugs in the top tier of topics considered more important than other things taught in schools.
- School district administrators indicated that teacher training institutions' preparation of teachers to present health information and skills is less than adequate.
- Parents clearly supported teaching problem solving, decision making, and other health-related skills in school.

Parent support has been shown in other ways, as well. For example, among 37 states reporting parental options to remove their children from HIV/AIDS instruction, less than 3% of parents exercised the option (Britton et al., 1992).

Overall, a clear and resounding call for action and a commitment to HIV/AIDS education has been heard from national, state, and local communities.

Planning Prevention Strategies

Given compelling documentation of the need for a school-centered focus on HIV/AIDS prevention programs, coupled with the strong support and endorsement from key sectors within our society, the next question becomes how to plan and practice effective prevention?

Schools as the Focus. The problems identified are broad-based: strategies for prevention must also be broad-based and comprehensive. A common conclusion of most program reviews is that effective programs should be centered in and around schools (Dryfoos, 1990; Kirby et al., 1994; Lavin et al., 1994). Low achievement is a major risk factor for problems such as delinquency and acting out, substance use, early unprotected intercourse, and dropping out of school. Therefore, acquisition of basic academic skills is fundamental (Dryfoos, 1990). Also, school is where most children spend much of their time and is often the one place in the community that is accessible and known by families. Ninety-five percent of the approximately 46 million school-age children in the United States attend school (White & Ballard, 1993). In addition to opportunities for classroom instruction, schools are the locus for nonacademic programs that link parents, health and social services, and community. Schools, colleges, and departments of education, as the primary unit preparing teachers, administrators, and student support staff, are well-positioned to become partners with K-12 schools.

What's Needed: Primary, Secondary, or Tertiary Prevention? Schools and communities differ widely in the types of problem behaviors manifested, age of initiation, pervasiveness of practices, environmental factors supporting or inhibiting adolescent behaviors, and the level of community receptivity to sexually-specific interventions. To develop strategies for prevention of HIV/AIDS, schools and communities must identify the scope of issues and then define goals and strategies for addressing the issues. The framework shown in figures 5-7 presents issues, goals, and strategies. The framework applies primary, secondary, and tertiary approaches to prevention.

Figure 5. Primary Prevention Goals and Strategies

***Primary Prevention*: Preventing high-risk behaviors before they occur**

Target Audience	Goals of HIV/AIDS Prevention Programs	Examples of School-Centered Strategies
Young people who have not yet initiated high-risk behaviors	Promote healthy lifestyles and prevent high-risk behaviors before they occur. For example, - abstinence - delayed initiation of sexual activities - avoidance of tobacco, alcohol, and drug use associated with sexual behaviors - selection of friends where sexual risk taking and substance use are not normative	HIV prevention education embedded in classroom instruction in comprehensive school health education K-12 to increase: - student health consciousness - knowledge - attitudes - social and decision-making skills - practices Comprehensive school health program that reinforces key concepts from multiple units within the school and community Parent training/support to promote and model healthful behavioral choices Policy mandates Use of media messages that reinforce classroom messages Social support/role modeling School reform and reorganization to ensure all children have opportunities to develop and maintain academic success, self-esteem, and positive future expectations Staff development for curriculum implementation

Primary prevention includes actions taken to promote and enhance health and well being, as well as to prevent initiation of behaviors likely to cause disease and education or social problems. *Approximately half (50%) of the 28 million youth in the U.S. between ages 10 -17 are not currently involved in high-risk behaviors and are progressing through the educational system in an expected manner* (Dryfoos, 1990). However, adolescence itself is often stressful. Additionally, youth are subjected to numerous negative influences through peers, family, and media; many are potentially at risk if they seek maladaptive ways to cope with these pressures. Of particular concern are youth practicing high-risk behaviors (Levy et al., 1995). To strengthen the capacity and motivation of youth to select adaptive, healthy behaviors, primary prevention in elementary school is critical *before initiation of experimentation.*

The strategies for primary prevention described in figure 5 are based on the work of Allensworth and Symons (1989). They include school health education, a comprehensive school health program, parent training/support, policy, media, role modeling/social support, school reform and reorganization, and staff development strategies.

Another seven million adolescents (25%) practice risky behaviors, but to a lesser degree. This includes experimenters, most of whom are involved in a single risky behavior (Dryfoos, 1990). For these youth, secondary prevention becomes critical. Secondary prevention involves actions taken after symptoms or problems (e.g., pregnancy or STDs) have occurred. For these youth, early screening and detection becomes critical. The primary goal of secondary prevention is to provide treatment and protection, and to prevent spread or escalation of disease and high-risk behaviors. For example, a student who is diagnosed with a STD requires the following: (1) treatment, (2) communication with past partners to let them know of possible exposure so they can receive treatment, (3) modification of behaviors to avoid a reoccurrence, and (4) skills and motivation to protect future partners. Traditional classroom instruction aimed at primary prevention is not adequate for students requiring more intensive secondary prevention programs. Educational programs must strengthen students' knowledge, communication skills, access to primary care, and motivation to protect themselves and their partner(s).

As the needs of students become more specific with early initiation of problem behaviors, HIV education that is focused, tailored to students' concerns, and explicit is necessary as part of or as a supplement to the school health education curriculum. More emphasis on early identification, counseling, and treatment for the sexually active student is required, as is primary health care for treatment of STDs, birth control, and, at times, prenatal care. Media messages should include information about availability and use of community health and social services. Staff development becomes more complex and extensive, since teachers and direct service providers (e.g., school nurses, counselors, social workers, psychologists, health educators, and health care providers) need more information, skills, resources, and motivation to work as a team. Organizational demands increase as greater resources are required and education and treatment programs become multidimensional.

Figure 6. Secondary Prevention Goals and Strategies

Secondary Prevention: **Early screening and detection of high-risk behaviors to provide treatment, protection, and to prevent spread or escalation (e.g., STDs)**

Target Audience	Goals of HIV/AIDS Prevention Programs	Examples of School-Centered Strategies
Youth who have already initiated one or more risky behaviors; children with the antecedents of high-risk behaviors; experimenters	If sexually active: - use condoms correctly and consistently - maintain a monogamous relationship with an uninfected partner - reduce the number of sexual partners - avoid injected drug use or having sex with a partner having a history of use of injected drugs - avoid or minimize alcohol and other psychoactive drug use If using alcohol or other psychoactive drugs: - avoid needle sharing - limit consumption - avoid driving while under the influence - avoid sex while under the influence Early detection and treatment of students with STDs to prevent reinfection and spread	Focused HIV-specific education units to supplement the K-12 school heath education curriculum Parent and/or partner education and training Early identification, education, and counseling for those who are sexually active Provision of school health centers for primary care, mental health services, social services, and health education Individual counseling and mentoring Policy mandates Media messages that include how to access community health and social service resources Social support/role modeling Early identification and intervention for youth engaged in alcohol use or other drug-taking behaviors Staff development for curriculum implementation and interprofessional training and technical assistance for school-community teams providing coordinated services

Figure 7. Tertiary Prevention Goals and Strategies

***Tertiary Prevention*: Providing treatment to restore health, prevent deterioration, prevent reoccurrence, or prevent secondary complications**

Tertiary Prevention	Target Audience	Goals of HIV/AIDS Prevention Programs	Examples of School-Centered Strategies
Prevention of reoccurrence of problem behaviors after initial treatment or intervention Prevention of secondary problems associated with high-risk behaviors (e.g., contracting HIV through I.V. drug use)	Youth who have histories of multiple problem behaviors requiring immediate, intensive, and comprehensive attention	Services for teenage mothers to prevent rapid repeat pregnancies and promote safer sex Alcohol and drug treatment and rehabilitation services for teens with existing problems Treatment for students with severe mental health disorders, which contribute to multiple problem behaviors	Intensive individual attention Community-wide, multiagency collaborative approaches Education programs for highest-risk children and youth (e.g., I.V. drug users and their sexual partners, homosexual males, and high-risk minority women) Comprehensive, multidisciplinary focus on risk factors rather than categorical behaviors Social skills training Peer involvement in interventions Community programs for school dropouts Institutional change to increase student achievement levels and expectations for success (e.g., alternative schools and schools within schools) Interprofessional training and technical assistance for school-community teams providing integrated services
Help HIV-infected students avoid secondary problems	Children 0-12 years of age who are HIV infected, attend school, and need special education, health, and psychosocial services Teens infected with HIV or other STDs.	Medical and psychosocial services for HIV-infected school-age children Protect HIV-infected students from educational, health, and psychosocial complications/problems secondary to their disease	Nondiscriminatory school policies Faculty and staff who are accurately informed about HIV Peers who are properly educated about HIV Quality psychosocial and health support system within the school setting, coordinated with the child's medical team Privacy and confidentiality of medical records Model support for persons with AIDS

The remaining 25% of youth aged 10 to 17 are estimated to be at high-risk of engaging in multiple problem behaviors (Dryfoos, 1990). Those who are having early unprotected intercourse are likely to be the same youth who are substance abusers, delinquents, and school failures. Seven million young people are at very high risk for multiple problems and require *immediate*, *intensive*, and *comprehensive* attention.

Tertiary prevention for this population involves treatment after the health and social problems have occurred to restore health, prevent further deterioration, prevent reoccurrence, or prevent secondary complications. An example of tertiary prevention would be an alternative school established for dropouts who have been through drug rehabilitation, or a program for pregnant and parenting teens.

Schools where numerous students have multiple interrelated problem behaviors require more complex collaborative strategies. Greater challenges are placed on teachers, direct service providers, and administrators. Students require intensive individual attention, community-wide multiagency collaborative approaches focused on risk factors rather than categorical behaviors, special HIV education programs for small groups, institutional changes through school restructuring and reform, and extensive interprofessional training and technical assistance for school-community teams to provide integrated services. As needs become more intensive and resources challenged, use of supplemental funding from multiple funding streams becomes essential. These intensive services are extremely expensive, although the alternative for youth is even more costly to society. The program strategies suggested in figure 7 for higher-risk youth draw from characteristics of effective programs identified in the literature by Dryfoos (1990) and Kirby and associates (1994).

Tertiary prevention also ensures that HIV-infected students at schools and day-care settings receive the educational, psychosocial, and medical supports necessary to promote, maintain, or restore health, while continuing to develop academically and psychosocially. Children who are frequently absent are prone to educational and social problems because of missed classroom instruction or intolerance from peers for their inability to participate in certain activities. Also, because most children with AIDS contract the disease through their HIV-infected mothers, many have experienced the death or disability of their mother, which can have severe emotional effects on the child. Through concerted efforts, schools can build support programs to help students cope with these stresses. The strategies for serving HIV-positive children suggested in figure 7 are adapted from the work of Black and Jones (1988).

School Health Education. For children and youth who have not yet initiated risky sexual and substance use behaviors and for those who are beginning to experiment, school health education is a critical early prevention strategy. School health education includes the development, delivery, and evaluation of planned instruction and other activities for students in preschool through grade 12, for parents, and for school staff. It is designed to influence positively the health knowledge, attitudes, skills, and behaviors of individuals. Traditionally teachers offer a broad array of content that includes community health, consumer health, environmental health,

family life, mental and emotional health, injury prevention and safety, nutrition, personal health, prevention and control of disease, and substance use and abuse. School health education should be cognitively, developmentally, age, culturally, and linguistically appropriate. This is particularly important with HIV/AIDS education, since the content is often sensitive and value-laden.

School health education can change students' knowledge, attitudes, and health behaviors (Connell, Turner, & Mason, 1985). All states have placed HIV/AIDS instruction within the framework of the health education curriculum (Britton et al., 1992). The premise is that generic skills, norms, and values taught across subjects will reinforce effective programs. Skill training for HIV prevention includes decision-making and social skills, such as communication, negotiation, and peer refusal skills. Skills in locating, using, and following up on health and social services also are necessary. Excellent models for incorporation of HIV/AIDS education in an appropriate manner throughout the K-12 curriculum are available (Scheer, 1992).

Comprehensive School Health Programs (CSHP). An interdisciplinary framework that offers school health services; school health education at all grade levels; a healthful, safe, and nurturing school environment; physical education; nutrition services; psychological, social, and counseling services; interactions between school and community health organizations; and school site health promotion programs for faculty and staff represents the best potential for all levels of prevention.

For higher-risk youth, coordinated or integrated services provide one-stop, unfragmented health and social service systems that are school-based or school-linked. A variety of programs, often in combination, are usually more effective than one-dimensional approaches. Programs span school remediation and dropout prevention programs, school-based or school-linked health centers, case management, incentive programs, university-school partnerships, business partnerships, teen parent programs, volunteer community service programs, and school reorganization programs (Dryfoos, 1994). All models provide the school-family-community linkages embodied in the concept of comprehensive school health programs. Unless these programs are coordinated, fragmentation of services and duplication will exist, with the same students and families participating in many fragmented, overlapping projects.

What Works. Kirby and associates (1994) conducted an exhaustive examination, based upon a national survey, of the relationship between HIV/AIDS and sex education curricula used in secondary schools and adolescent sexual behaviors. Examination of commonalties of four programs that clearly had a positive impact on behavior indicates:

1. *None* of the sex and HIV education programs hastened the onset of intercourse, the frequency of intercourse, or the number of sexual partners. Some delayed onset of intercourse and reduced the frequency of intercourse and the number of sexual partners.

2. Some curricula increased condom use or other forms of contraception for youth who were sexually active. However, characteristics of effective and ineffective programs varied considerably.

3. Abstinence programs did not delay onset of intercourse, although the limited number of published evaluations had major limitations that could have obscured program impact.

4. The greater the specificity, the more effective the program. For example, sex education that emphasized delaying intercourse was more likely to accomplish that; HIV education that emphasized condom use and reduction of unprotected sex was more likely to accomplish that. The ability to tailor curricula for small groups with common needs increased effectiveness.

5. Education offered in health and family planning clinics could have an impact on contraceptive use if it was sufficiently intensive or comprehensive. Short interventions had little impact.

Figure 8. Characteristics of Effective HIV/AIDS and Sex Education Curricula (Kirby et al., 1994)

Effective Curricula:

- *Include a narrow focus on reducing sexual risk-taking behaviors that can lead to HIV/STD infection or unintended pregnancy*. Behavioral goals are limited and specific, such as delay of initiation of intercourse or encouragaement of using protection.

- *Use social learning theories as a foundation for curriculum development*. These curricula go beyond the cognitive level and focus on social influences, individual values, group norms, and social skills.

- *Employ a variety of teaching methods that involve the participants and have them personalize the information*. Experiential classroom and homework activities included small group discussions, games or simulations, brainstorming, role-playing, written rehearsal, verbal feedback and coaching, visiting or telephoning family planning clinics, and interviewing parents. Several curricula also used peer educators or videos of characters who resembled the students.

- *Provide basic, accurate information about risks of unprotected intercourse and methods of avoiding unprotected intercourse*. Information should focus on basic facts needed to make behaviorally relevant decisions.

- *Include activities that address social pressures on sexual behaviors*. Such pressures include media and social factors.

Figure 8 (continued)

- *Reinforce clear and appropriate values and messages that strengthen individual values and group norms against unprotected sex.*
- *Provide modeling and practice of communication and negotiation skills.*
- *Provide training for individuals implementing the program.*

Figure 8 presents characteristics of effective HIV/AIDS education. Effective curricula emphasized facts, values, norms, and skills necessary to avoid sex or unprotected sex. Also, effective curricula presented a clear stand and emphasized clear behavioral values and norms. Still unexamined is the cumulative impact of additional HIV-related components, such as parent programs, peer programs, after-school sessions and individual counseling, or the synergistic effects of placing HIV-specific programs within a school health education curriculum.

Dryfoos (1990) conducted an extensive analysis of about 100 different successful prevention programs for high-risk youth spanning key areas of problem behavior. A number of important lessons and concepts were extracted about characteristics of effective programs to reach youth through secondary and tertiary prevention. These findings, presented in figure 9, show a high degree of similarity compared with other analyses of successful programs (Dryfoos, 1990; Price, Cowen, Lorion, & Ramos-McKay, 1988; Schorr, 1988).

Figure 9
Principles of Effective Programs for High-Risk Youth

- *No one solution exists.* No single program component alone can alter the outcomes for all youth at risk.
- *High-risk behaviors are interrelated.* Programs designed to modify the factors underlying high-risk behaviors should focus on risk factors rather than categorical problem behaviors.
- *A package of services is required within each community.* Community-wide planning is essential to bring all institutions together to determine the multiple components needed and how to strengthen implementation. A comprehensive school health program provides a framework for development and coordination of essential components within the school and community.
- *The timing of interventions is critical.* Transitions from preschool, elementary, and middle school are critical points when setbacks occur. Attention to those transitions is critical.

Figure 9 (Continued)

- *Continuity of effort must be maintained.* One-shot lessons do not have lasting effects on student attitudes and behaviors. Similarly, single inservice sessions are not sufficient to ensure that teachers transfer training into practice when implementing a program. Follow-up training and technical assistance, coaching, monitoring, and feedback are necessary to maximize implementation.

Implementation Issues

Although research can determine characteristics of effective programs, process evaluations of program implementation note numerous implementation barriers and failures. These problems exist at the classroom, administrative, and school-community collaborative levels.

Classroom Barriers. Nearly all states require that health education be provided at the elementary, middle/junior high, and senior high school levels. CDC's recent *School Health Policies and Programs Study* (SHPPS) reported that 73% of all middle/junior high schools and 84% of senior high schools required at least one health education course. In less than half of schools the course was one semester long, and in less than one-quarter of schools, the course extended through the entire school year. Few states include health education in their mandated academic testing requirements (Collins et al., 1995).

In most states school health education at the elementary level is provided by regular classroom teachers, while regular classroom teachers, particularly those in physical education or biology, or health education specialists are typical providers of secondary health education. About 69% of the states require that secondary school health education teachers be certified, while only 6% of the states have such a requirement for elementary school health educators (Collins et al., 1995). SHPPS found 84% of secondary school health education teachers were including HIV prevention as a health topic, but only 45% devoted more than one class period to the topic. Only 24% of regular classroom teachers assigned to teach health at the secondary level spent more than one class period on HIV prevention.

HIV instruction generally involves affective factors and skill mastery, as well as information about the physiological aspects of the disease. Teacher attitudes and concerns about content and methods influence both the scope and emphasis of instruction. For example, teacher attitudes and instructional responses influenced the effectiveness of sexuality education in promoting the health and behavioral intentions of students (Hamilton & Gingiss, 1993).

Teachers' knowledge, attitudes, resources, and commitment for HIV/AIDS education differ by school level. For example, in a comparison of high school and middle school teachers of HIV/AIDS education, the middle school teachers spent less instructional time on HIV/AIDS

education and reported more instructional barriers, less support from district personnel, a poorer fit of HIV/AIDS education with other subjects, less adequate preparation, and less responsibility and effectiveness (Gingiss & Basen-Engquist, 1994). Since many sexual risk-taking practices are initiated prior to high school, this is of major concern.

Concerns exist over *what* teachers teach and *how* they teach, as well as *if* they teach HIV/AIDS education. A longitudinal study of implementation of a sexuality education curriculum in the 6th grade reported that teachers placed diminished importance on content about birth control and student sexual behaviors, although they emphasized self-esteem, interactional skills, and teaching about STDs (Gingiss & Hamilton, 1989). Only a third of secondary teachers in a statewide survey perceived they had adequate preparation to use skill-building activities or to discuss homosexuality, how to clean shared needles, and the association of alcohol and drug use with sexual behaviors. The teachers often used the instructional methods they were most comfortable with -- traditional methods such as videos or films, lectures, and group discussions. Methods that teachers felt the least comfort and self-efficacy with included peer leaders, role playing, and handling condoms. These were also the methods least frequently used. Of concern, the methods *not used* were those that have been highlighted as most effective (Kirby et al., 1994). Teachers also identified inadequate access to resources and a lack of skills to assess the relative effectiveness of available curriculum materials as barriers (Gingiss & Basen-Engquist, 1994).

Teacher attitudes influence both initial receptivity to a course and motivation to continue teaching. For example, when teachers were uncomfortable with content, methods, or student responses to a sexuality education course, they were prone to discontinue teaching the course (Levenson-Gingiss & Hamilton, 1989). Given the effort, time, and expense involved in training teachers, attention to factors that influence their attitudes becomes imperative to achieve complete implementation and maintenance of a curriculum.

Training can have a major impact on teacher attitudes and performance. For example, over half of Texas middle and high school teachers providing instruction about HIV were self-taught and noted inadequate access to resources (Gingiss & Basen-Engquist, 1994). Those self-taught perceived less adequate preparation across all topics; lower personal comfort with both content and methods; less support from principals, superintendents, other district personnel, and parents/community; and less commitment to teach about HIV/AIDS.

Practice of skills and strategies foreign to a teacher's existing repertoire requires more substantial training than typically provided. When student outcomes are complex, such as changes in attitudes and behaviors about sexual risk taking and alcohol and drug use, follow-up staff development becomes even more important. Continuous on-going staff development that corresponds to the stages of teacher development is essential to achieve full implementation and continuation (Gingiss, 1992; Hall & Hord, 1984; Joyce & Showers, 1988). This was demonstrated when 81% of school personnel teaching a sexuality education course indicated follow-up workshops were necessary (Calamidas, 1990).

While most states have provided in-service training or have developed written guidelines for teacher preparation, only 11 states have "excellent" teacher training, defined by the Sexuality Information and Education Council of the United States (SIECUS) to include both written guidelines and *required* in-service. The need for both training and access to adequate teaching resources is widespread and acute.

Administrative Barriers. School and district climate, leadership attitudes and behaviors, and district policies and systems are critical organizational factors needing attention during staff development planning and program delivery. Yet, in a survey of the Council of Chief State School Officers, members reported *perceived lack of administrative commitment as the number one barrier to implementing comprehensive school health education*, followed by a lack of adequately prepared teachers (Butler, 1993).

Unless administrators, as well as other teachers, are supportive, staff development will have limited effectiveness. Administrative leadership includes priority setting, resource allocation, and scheduling, as well as social leadership. Principals play integral roles in influencing the building of norms that expect and value professional growth (Joyce & Showers, 1988).

Teachers respond most successfully to innovations when administrators exert strong and continuous pressure for implementation, accompanied by adequate assistance during trials (Huberman & Miles, 1984). Administrators are gatekeepers who set priorities that protect their teachers and staff from being overwhelmed with too many expectations for change at one time. Administrators demonstrate support through informal encouragement, formal endorsement, personal involvement, facilitation of staff development, and designation of resources for activities.

In conclusion, professional preparation programs need to focus on administrators as well as on teachers and direct service providers.

Barriers to Collaboration. Research and evaluation reports echo problems of collaborative partnerships that serve high-risk youth. Most secondary and tertiary programs for HIV prevention require interprofessional education to maximize team functioning and program administration. Change must occur at the individual, unit (school), and district levels for implementation to occur. However, problems often noted include turf issues, power and control struggles and imbalances, resource issues, information sharing, staff burnout, frustrations over evaluations, communication problems, and dysfunctional teams. Some of these barriers reflect larger political, fiscal, and organizational factors. Others are symptoms of fundamental underlying problems on the individual and worksite levels. Differences in language, mission, and cultures between partners intensify issues. Interprofessional education, training, and technical assistance can diminish these problems.

Prevention of HIV/AIDS Within Institutions of Higher Education and Schools, Colleges, and Departments of Education

Institutions of higher education (IHE) have numerous opportunities to prevent HIV/AIDS and diminish other health-compromising behaviors of children, youth, and postsecondary students. As summarized in figure 10, within institutions of higher education, schools, colleges, and departments of education (SCDE) can provide leadership through internal, vertical, and horizontal initiatives. These include preparation of faculty and staff who work with preservice students to work in partnerships within the university, with schools, and with the community.

Specifically, institutions of higher education, with leadership and assistance from SCDEs, can work at the following levels:

1. **SCDE level**. Provide training and incentives to SCDE faculty and staff so they can better assist preservice education, health, and social work students, as well as those preparing for related professions, to protect and improve the health of students in grades K-12, and to work in interdisciplinary, child-focused teams. Encourage interdisciplinary faculty teams to plan and implement professional preparation programs for those planning to work in or with schools.

2. **Campus-level partnerships**. Build institutional capacity to implement comprehensive and integrated programs for preventing HIV infection and improve the health of postsecondary students, especially those at high risk for HIV infection.

3. **School-level partnerships**. Encourage SCDE faculty and staff to assist education, health, and social service professionals in the schools to protect and improve the health of students in grades K-12 through professional development and technical assistance, as well as program development, implementation, and evaluation. Encourage an interdisciplinary team approach

4. **Community-level partnerships**. Serve local communities through linkage of postsecondary students with personal, professional, and volunteer opportunities and resources in the community, and through community advocacy and assistance for changes in policy and resource allocation.

Within Schools, Colleges, and Departments of Education. Schools are widely recognized as the primary focus for programs to protect and improve the health of students in grades K-12. Since a wide range of prevention programs are needed to promote and maintain healthy students, the challenges to schools and SCDEs are enormous. Responses are often complex and multidimensional.

Preservice teacher preparation. Over 43.7 million children and youth attend elementary or secondary schools. Moreover, virtually all youths attend school before they initiate sexual risk-taking behaviors and a majority are enrolled when they initiate intercourse (Kirby et al., 1994).

Figure 10. Involvement of Schools, Colleges, and Departments of Education (SCDE) in HIV/AIDS Prevention

University
Establish campus-wide coalitions that include:
SCDE faculty and faculty from related professions
Student health service
Student organizations
Student life
Counseling center
Central administration
School
Provide professional development and continuing education
Offer interprofessional training and technical assistance
Review effectiveness of curricula and provide assistance with modification
Conduct research and development of effective programs
Assist in evaluation
Schools, Colleges, and Departments of Education
Infuse HIV/AIDS education into preservice teacher preparation, in collaboration with health education faculty
Infuse HIV/AIDS education into academic preparation of school administrators, school counselors, educational psychologists, and related professionals
Establish interprofessional education classroom and field-based professions.
Develop a resource center for internal and external use
Community
Link university faculty and students to community health and social service providers
Provide a forum for community dialogue around critical HIV/AIDS issues
Facilitate community planning and development to meet local HIV/AIDS concerns
Advocate for policies and resources to address community needs

Consequently, *teachers have unparalleled opportunities* to make an impact through HIV education and related health instruction. SCDEs are ideally positioned to prepare preservice teachers for this role through provision of current content and methods for teaching about HIV/AIDS prevention. Furthermore, preservice teacher preparation promises dual benefits. As postsecondary students learn how to influence children, they are also developing the expertise and motivation to practice healthy, safe behaviors themselves. Since many preservice education majors are at risk, the potential benefits for their own health, the health of their sexual partners, and the children they will serve are vast.

Unfortunately, *a review of practice in SCDEs indicates much room for improvement*. Even though school health education at the elementary level is provided by regular classroom teachers in most states (Ballard et al., 1990), a significant number of professional preparation programs do not include HIV/AIDS education for preservice elementary education majors (White & Ballard, 1993). A recent catalog study of training and preparation of teachers for HIV/AIDS instruction concluded that few SCDEs (14%) offered *required* courses in sexuality education or HIV/AIDS. Furthermore, many of the required or elective courses in health for teachers did not mention HIV/AIDS or include a methods/teaching perspective (Rodriguez, Young, Renfro, Ascencio, & Haffner, 1996). While catalogs are not always a reliable indicator of course content, administrators and faculty need assistance and motivation to prepare students to teach about HIV/AIDS (Gingiss & Basen-Engquist, 1994).

School district administrators in a national study indicated that teacher training institutions' preparation of teachers to present health information and skills is less than adequate (Dryfoos, 1990). Few teachers in a Texas survey received any preparation in HIV/AIDS instruction from a college or university (Gingiss & Basen- Engquist, 1994). *Need exists for SCDEs to take more visible initiatives to infuse preparation for HIV/AIDS education throughout their professional development programs*.

The lack of attention to this area is reflected in preservice students' misconceptions about HIV/AIDS and their self-perceptions of inadequate preparation. For example, while preservice elementary education majors agree they would eventually have a child with HIV in their classroom and that AIDS education should be taught in the elementary grades, over 20% did not understand the basics about HIV/AIDS and only one-half stated they could comfortably answer elementary students' questions about HIV/AIDS. Less than half were familiar with policies and procedures for safely cleaning up blood or body fluids and other protective procedures (Ballard et al., 1990). Preservice education majors have numerous misconceptions about HIV transmission, policies, and testing, accompanied by discomfort discussing sexual subject matters (Cinelli, Sankaran, McConatha, & Carson, 1992; Sankaran, McConatha, Cinelli & Carson, 1993).

If preservice teachers do not have a health education methods course, they are less likely to be comfortable and motivated to teach specific HIV content. Teachers with low comfort and commitment levels also avoid student-centered, experiential methods such as role playing, use of

peer leaders, and other approaches to social skill training (Gingiss & Basen-Engquist, 1994). Additionally, future teachers require preparation to locate and review available teaching resources.

As the roles of teachers expand through school reform, teachers have increasing opportunities to serve as change agents in their schools and participate in collaborative school-community partnerships. However, additional preservice professional preparation is necessary for them to serve effectively in these expanding roles.

Given the disproportionate number of African Americans and Hispanics affected by HIV/AIDS, and the potentially powerful influence of teachers as role models to those at risk, heightened emphasis on HIV prevention at teacher preparation institutions within Historically Black Colleges and Universities (HBCU) and the Hispanic Association of Colleges and Universities (HACU) is even more important.

Administrator preparation. With school reform and increases in comprehensive collaborative programming, administrators also face a myriad of new legal, policy, and management challenges. These range from space, confidentiality, data management, external funding, and evaluation concerns to how to meet the needs of children with AIDS. SCDEs have unparalleled opportunities to prepare future administrators and student support service staff through core courses and field placements. Focusing classroom and field placement/student teaching experiences around HIV/AIDS prevention can address the prevention needs previously identified, and provide a prototype for examining related educational and social issues confronting schools and society.

Interprofessional preparation for integrated services. SCDEs can also take major leadership roles in interprofessional education. Changes in traditional systems of service delivery, role definitions, organizational restructuring, professional boundaries, and family roles are all going through review as service and funding structures change. Prospective and current professionals need opportunities to develop expertise for serving on coordinated or integrated service delivery teams necessitated by new models of service delivery and fiscal management. Development of shared vision and practice principles requires on-going education, training, and technical assistance. Student behaviors such as dropping out of school, premature and unprotected sexual activities, and substance abuse provide urgent focuses for interprofessional instruction and practice.

University interprofessional education programs, such as the Training for Interprofessional Collaboration project at the University of Washington, Seattle (Knapp et al., 1994) provide models for involving colleges and universities in interprofessional collaboration and service integration (Lawson & Hooper-Briar, 1994). As one of the universities participating in the National Center for Social Work and Education Collaboration funded through Fordham University, the University of Houston involved education, health education, and social work students in joint classes and supervised field seminars and collaborative practice activities in the

schools. Evaluation of this project showed that students in an interprofessional, eight-session seminar demonstrated significantly higher levels of receptivity to collaboration and of self-efficacy than those not exposed to the seminar (Gingiss & Norwood, 1996a). Relatedly, graduate social work, education, and health students exhibited positive changes in receptivity to collaboration as the result of a team-taught interprofessional course about service integration for children and families (Gingiss & Norwood, 1996b).

Collaboration between education and health education. All states have placed HIV/AIDS education within the framework of a comprehensive K-12 school health education curriculum. Since school health education at the elementary level is provided by regular classroom teachers, and many teaching sexuality education courses and HIV/AIDS education in the secondary school are not health teachers, education majors need to receive as much background health content and methods as possible.

Learners go through various stages in response to use of new programs, concepts, and methods (Hall & Hord, 1984). These stage models apply to preparing educators for participation in primary, secondary, and tertiary prevention for HIV/AIDS. Preservice education students need opportunities to develop initial awareness, and to pursue information-gathering, as well as to clarify their own lifestyle decisions from a personal health course or units incorporated into required physical education courses. A required methods course in health education can provide content and methods appropriate for HIV/AIDS instruction. Additional courses can provide supplemental information and resources specific to HIV/AIDS (such as a sexuality education course or a course in HIV/AIDS). Models for such courses exist (Dorman, Collins, & Brey, 1990). On some campuses, students in elementary education may select health as a specialization area, major, or minor.

Even with an extensive background such as that just proposed, preservice teachers also need opportunities to apply skills through initial classroom trials and coaching from the supervising teacher and faculty.

Optimally, students would receive a continuum of courses and field experiences that build upon foundations acquired during a required health education methods class. Additional aspects of HIV/AIDS content and methods could be infused into core education courses such as foundations of education, educational methods, human development, and student teaching.

Institutional boundaries pose difficulties in coordinating the education and health education academic programs. Less than half of health education degree programs are located in SCDEs. Those not in a SCDE were based in colleges of health sciences or schools of public health (Association for the Advancement of Health Education, 1995). These barriers need not prevent coordination between education and health but they do require attention to the organizational work unit (academic program area or department) and individual faculty considerations to facilitate a fit.

Campus Partnerships. Given postsecondary students' high levels of sexual risk taking and use of alcohol, system-wide efforts to improve their health behaviors are imperative. Models and guidelines for establishment of campus-wide coalitions have been developed through funding from the Centers for Disease Control and Prevention. One of these projects, the AIDS Consortium of Texas Colleges and Universities (1995), tracked implementation and institutionalization factors at 40 colleges and universities from 1993-1995. The campus unit most frequently represented on the HIV/AIDS task force was student health services (at 81% of campuses). Faculty, student life, the counseling center, and student organizations also were represented on most coalitions. Only about a third of campuses had central administration representation, even though this is critical for program implementation and institutionalization. Over 50% of campuses were involved in the following activities in 1995:

- AIDS awareness day/week/month (84%)
- Counseling related to HIV/AIDS (84%)
- Workshops/speakers (82%)
- Classroom instruction other than teacher preparation (82%)
- HIV testing and referral (79%)
- Student orientation (74%)
- Condom distribution (74%)
- Health fair (61%)
- Peer education (61%)

Of importance, *only 24% of the participating institutions of higher education had infused HIV/AIDS education programs into classroom instruction in teacher preparation during 1995*. This represented a reduction from a 47% level in 1993. During the 3-year evaluation, classroom instruction in teacher preparation was the activity that diminished the most (AIDS Consortium of Texas Colleges and Universities, 1995).

Major support for campus-wide activities came from community resources, and the major barrier was lack of fiscal resources. Encouragingly, as programs matured, levels of major support from fiscal resources; administrator, community, student, and faculty attitudes; and communications across campus units improved.

Involvement in campus-wide HIV/AIDS coalitions can be productive and meaningful for faculty, staff, and postsecondary students. The nature of activities in Texas suggest some possibilities for other institutions of higher education. The increasing lack of involvement by teacher preparation faculty in Texas underscores the need for better two-way communications across campus.

School Partnerships. To prepare education professionals for practice in today's communities, student teaching and field placements of preservice students need models of exemplary practice and collaboration. Professional development by SCDEs can strengthen the knowledge, attitudes, and skills of current teachers and administrators, and enhance their

preparation and motivation to implement HIV/AIDS education and prevention programs. It can also better prepare teachers and administrators for participation in comprehensive, collaborative programs outside of the classroom. The interactions benefit both institutions. University involvement in professional preparation ultimately contributes to more effective training and practice. Additionally, university faculty learn and grow from their experiences in the schools. Examples of ways in which SCDEs could collaborate with schools include:

- Use of school staff or adjunct faculty to work with preservice students;
- Provision of professional development and continuing education for administrators, staff, and faculty;
- Delivery of interprofessional training and technical assistance for collaborative service delivery;
- Assessment of the relative effectiveness of curricula considered for adoption and assistance with curriculum modification for local communities;
- Research and development of efficacious prevention programs; and
- Assistance in evaluation.

Community Partnerships. As institutions of higher education serve their communities, faculty and graduate students who are involved in community-based HIV/AIDS projects can make distinct contributions. Examples of contributions include:

- Linkage of university faculty and students with community health and social service providers to insure access to resources for personal and professional use, field placements, and volunteer opportunities;
- Provision of a forum for community dialogue around critical HIV/AIDS issues;
- Participation in community planning and development to meet local HIV/AIDS concerns; and
- Advocacy for policies and resources that address community needs.

AACTE/CDC Project: *Build a Future Without AIDS*

The American Association of Colleges for Teacher Education (AACTE) has received funds from the U.S. Centers for Disease Control and Prevention (CDC) to facilitate teacher education that includes integrated activities for preventing HIV infection and other serious health problems among K-12 and postsecondary students. This award established a 5-year project that seeks to integrate HIV/AIDS prevention education into schools, colleges, and departments of education.

Eight national organizations received funding to work cooperatively in the development of integrated activities for HIV/AIDS prevention education. In addition to AACTE, the other funded organizations are the American College Health Association, American Association of Community Colleges, Association of American Colleges and Universities, BACCHUS/GAMMA Peer Education Network, National Association for Equal Opportunity in Higher Education, National Association of Student Personnel Administrators, and the United Negro College Fund.

Identification of Best Practice. Working with a national advisory panel of education, health, and community representatives; national leaders in teacher education; teacher education students; and national education organizations, AACTE is identifying effective methods for influencing institutional change.

Development of Materials for Teacher Educators and Interprofessional Education. AACTE is identifying and improving access to already-existing materials. Over the course of the project, AACTE will develop new materials useful for teacher preparation programs and interprofessional education programs.

Dissemination of Information. AACTE is disseminating information for teacher education faculty and deans through various mechanisms including conferences, technology, and newsletters. Through these activities, AACTE hopes to *Build a Future Without AIDS* by:

- Increasing the comfort and expertise of education faculty in teaching and administering HIV/AIDS education programs,
- Providing HIV/AIDS education methods and materials for teacher education students, and
- Promoting development of standards for teaching about HIV/AIDS prevention education in teacher preparation programs.

Conclusions

When 90 leaders from higher education, health, public education, city and state governments, and philanthropy convened at a conference focusing on higher education and the health of youth, they concluded:

> Campus and community are interdependent and will thrive or diminish together. Since children and youth need to be healthy in order to learn, and can learn to keep healthy, all institutions with educational missions must concern themselves with the health of the young. (Harvard University, 1995)

Schools, colleges, and departments of education, through preparation of future educators and through partnerships with campus, school, and community groups, can take a leadership role in helping to meet the challenge of building a future without AIDS.

JOINT STATEMENT ON SCHOOL HEALTH

by

The Secretaries of Education and Health and Human Services

Health and education are joined in fundamental ways with each other and with the destinies of the Nation's children. Because of our national leadership responsibilities for education and health, we have initiated unprecedented cooperative efforts between our Departments. In support of comprehensive school health programs, we affirm the following:

- ***America's children face many compelling educational and health and developmental challenges that affect their lives and their futures.***

  These challenges include poor levels of achievement; unacceptably high drop-out rates; low literacy; violence; drug abuse; preventable injuries; physical and mental illness; developmental disabilities; and sexual activity resulting in sexually transmitted diseases, including HIV, and unintended pregnancy. These facts demand a reassessment of the contributions of education and health programs in safeguarding our children's present lives and preparing them for productive, responsible, and fulfilling futures.

- ***To help children meet these challenges, education and health must be linked in partnership.***

  Schools are the only public institutions that touch nearly every young person in this country. Schools have a unique opportunity to affect the lives of children and their families, but they cannot address all of our children's needs alone. Health, education, and human service programs must be integrated, and schools must have the support of public and private health care providers, communities, and families.

- ***School health programs support the education process, integrate services for disadvantaged and disabled children, and improve children's health prospects.***

  Through school health programs, children and their families can develop the knowledge, attitudes, beliefs, and behaviors necessary to remain healthy and perform well in school. These learning environments enhance safety, nutrition, and disease prevention; encourage exercise and fitness; support healthy physical, mental, and emotional development; promote abstinence and prevent sexual behaviors that result in HIV infection, other sexually transmitted diseases, and unintended teenage pregnancy; discourage use of illegal drugs, alcohol, and tobacco; and help young people develop problem-solving and decision-making skills.

- ***Reforms in health care and in education offer opportunities to forge the partnerships needed for our children in the 1990s.***

  The benefits of integrated health and education services can be achieved by working together to create a "seamless" network of services, both through the school setting and through linkages with other community resources.

- ***GOALS 2000 and HEALTHY PEOPLE 2000 provide complementary visions that, together, can support our joint efforts in pursuit of a healthier, better educated Nation for the next century.***

  GOALS 2000 challenges us to ensure that all children arrive at school ready to learn; to increase the high school graduation rate; to achieve basic subject matter competencies; to achieve universal adult literacy; and to ensure that school environments are safe, disciplined, and drug free. HEALTHY PEOPLE 2000 challenges us to increase the span of healthy life for the American people, to reduce and finally to eliminate health disparities among population groups, and to ensure access to services for all Americans.

In support of GOALS 2000 and HEALTHY PEOPLE 2000, we have established the Interagency Committee on School Health co-chaired by the Assistant Secretary for Elementary and Secondary Education and the Assistant Secretary for Health, and we have convened the National Coordinating Committee on School Health to bring together representatives of major national education and health organizations to work with us.

We call upon professionals in the fields of education and health and concerned citizens across the Nation to join with us in a renewed effort and a reaffirmation of our mutual responsibility to our Nation's children.

Richard W. Riley
Secretary of Education

Donna E. Shalala
Secretary of Health and Human Services

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